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February 25, 2002

OFFICE OF THE
EXECUTIVE SECRETARY

David Waddell
Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243

Re: Petition of Tennessee UNE-P Coalition to Open Contested Case
Proceeding to Declare Unbundled Switching an Unrestricted Unbundled
Network Element.

Docket: 02-00207

Dear David:

Attached is the original and thirteen copies of the above-captioned Petition which asks the Tennessee Regulatory Authority to declare circuit switching an unbundled network element.¹ This Petition is filed pursuant to T.C.A. § 65-5-209(d) which requires the agency to set the matter for hearing within thirty days and to issue a decision twenty days thereafter. In order to assist the agency in meeting that schedule, the Petitioners are also filing today direct testimony in support of the Petition.

Because of the short time frame, the Authority may wish to refer this matter to a Hearing Officer for a decision on the merits, subject to agency review. If so, the Authority would need to make that referral as soon as possible. Therefore, the Petitioners request that this matter be addressed at the Authority's next meeting on February 26, 2002.

The Petitioners have notified BellSouth of this pending filing and this request that the matter be raised at the TRA's next meeting to consider whether to appoint a Hearing Officer.

¹ The Petition is filed on behalf of the UNE-P Coalition which consists of Access Integrated Network, Inc.; Birch Telecom of the South, Inc.; Ernest Communications, Inc.; MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc. (collectively, "WorldCom"); NewSouth Communications Corp.; and Z-Tel Communications, Inc.

February 25, 2002
Page 2

A \$25.00 filing fee is enclosed.

Respectfully submitted,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

By: _____

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Attachment
c: Guy Hicks, Esq.

BEFORE THE TENNESSEE REGULATORY AUTHORITY
Nashville, Tennessee

**IN RE: PETITION OF TENNESSEE UNE-P COALITION TO OPEN A
CONTESTED CASE PROCEEDING TO DECLARE SWITCHING AN
UNRESTRICTED UNBUNDLED NETWORK ELEMENT**

DOCKET NO. _____

PETITION TO OPEN CONTESTED CASE PROCEEDING

Pursuant to T.C.A. § 65-5-209(d), the Tennessee UNE-P Coalition¹ hereby requests that the Tennessee Regulatory Authority (“TRA” or “Authority”) hold a contested case proceeding to establish unrestricted local switching as a “new interconnection service.”

The TRA has the authority to grant the requested relief pursuant to T.C.A. § 65-5-209(d) and T.C.A. § 65-4-124(a) (entitling telecommunications providers in Tennessee access to features, functions, and services on an unbundled and non-discriminatory basis). In conducting its review, the TRA can and should also carry out the statutory analysis required by Section 251(c)(3) of the Communications Act of 1934, as amended (the “Act”), 47 U.S.C. § 251(c)(3),² to declare switching to be an unbundled network element (“UNE”) under federal law. To add a UNE pursuant to Section 251(c)(3), Federal Communications Commission (“FCC”) rules require

¹ The Tennessee UNE-P Coalition includes the following companies: Access Integrated Networks, Inc.; AT&T Communications of the Southeast, Inc.; Birch Telecom of the South, Inc.; Ernest Communications, Inc.; MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc. (collectively, “WorldCom”); NewSouth Communications Corp.; and Z-Tel Communications Inc.

² Section 251(c)(3) of the Act requires incumbent local exchange carriers (“ILECs”) to provide “nondiscriminatory access to network elements on an unbundled basis . . . in a manner that allows requesting carriers to combine such elements in order to provide . . . telecommunications service.” 47 U.S.C. § 251(c)(3).

a state to apply the same Section 251(d)(2) "impairment" analysis³ that the FCC performed in establishing its national list of UNEs.⁴ While the TRA has sufficient authority under state law to provide the requested relief, by demonstrating compliance with the stricter federal impairment standard the TRA will avoid any possible challenge to its authority.

I. Introduction and Summary

By granting the requested relief, the Authority will help to ensure the continued viability of the so-called Unbundled Network Element Platform, or "UNE-P." Preserving and expanding the availability of UNE-P is critical because it is the form of local service entry that has proven most workable for bringing competitive alternatives to the mass market of residential and business customers served over analog facilities. UNE-P allows competitive providers to deliver on the promise of the Telecommunications Act of 1996 and bring the benefits of competition to the mass market rapidly, ubiquitously, and without having to duplicate the existing circuit-switched network.

Under UNE-P, competitive local exchange carriers ("CLECs") provide local exchange service to their customers by leasing from the ILEC all of the necessary pieces of the ILEC's network.⁵ The switching UNE is at the core of UNE-P. It is the purchase of unbundled

³ In determining what network elements must be made available by ILECs as UNEs, Section 251(d)(2) directs the FCC to consider whether "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer." 47 U.S.C. § 251(d)(2).

⁴ In November 1999, the FCC defined a national list of UNEs that ILECs are required to make available under Section 251(c)(3). *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking*, 13 FCC Rcd 3696 (1999) ("FCC UNE Order"); 47 C.F.R. § 51.319.

⁵ The key components of the ILEC network included in UNE-P are the loop serving the customer's premises, circuit switching, and inter-office transport. Included in the switching element are the so-called "vertical features," including call waiting, three-way calling, and the like.

switching, in a package with the other elements comprising the Platform, that allows UNE-P providers to offer end-to-end local exchange service. Where switching is not available as a UNE, UNE-P can not be used to provide service to customers.

Current FCC rules require ILECs to make all of the UNEs comprising UNE-P available to requesting CLECs. That federal obligation is, however, subject to a critical exception. As discussed in more detail in section V.A. below, in the top 50 metropolitan areas—which include Nashville⁶—ILECs are not required to provide switching to CLECs serving customers with four or more lines. For CLECs like the members of the Tennessee UNE-P Coalition that focus primarily on analog residential and business customers or provide service primarily in smaller cities and rural areas, the ability to serve larger customers in Nashville is critical. Access to densely clustered, high revenue customers allows competitors to spread their overhead and fixed costs over a sufficiently large number of customers and lines to enable them to serve smaller customers in non-metropolitan areas. Without access to the Nashville market, it would be difficult for many UNE-P providers to justify broad competitive entry in Tennessee.

Furthermore, the FCC recently opened a proceeding to revisit its rules governing UNEs. See *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-339, Notice of Proposed Rulemaking, FCC 01-361 (Dec. 20, 2001). The ILECs are advocating that the FCC further restrict, or even eliminate the availability of switching (and thus of UNE-P) altogether. A decision in the FCC's proceeding is expected before the end of the year, but its outcome is unclear.

The TRA should not allow the future of UNE-P and mass market competition in Tennessee to be dependent on the FCC. The Authority is in a far better position to judge the

⁶ Seven other markets in the BellSouth region are among the top 50, including Fort Lauderdale, FL; Miami, FL; Orlando, FL; Atlanta, GA; New Orleans, LA; Greensboro/Winston Salem/Highpoint, NC; and Charlotte/Gastonia, NC, Rock Hill, SC.

unbundling needs of CLECs in Tennessee than the FCC. By declaring that, in Tennessee, the ILEC must make switching available without restriction on a statewide basis, the Authority can proactively act to ensure that competition grows and flourishes in Tennessee. Without the continued availability of UNE-P, it is unclear whether the members of the Tennessee UNE-P Coalition and other CLECs would have the ability to continue to provide competitive local service to mass market residential and business customers in Tennessee. What is clear is that, by taking action to ensure the viability of UNE-P, the TRA will be acting to protect and encourage the competitive entry vehicle that has proven successful in serving the mass market.

II. The Tennessee UNE-P Coalition and Its Members

The companies that comprise the Tennessee UNE-P Coalition are all CLECs offering local exchange and other services. AT&T and WorldCom are of course well known to this Commission.

Access Integrated Networks ("AIN") utilizes UNE-P to provide over 7000 lines of service to small businesses in the state of Tennessee. AIN serves 2-3 line business customers in over 115 communities in the state.

Birch Telecom of the South has been providing service in Tennessee since January, 2001, and currently serves over 7,000 small business and residential subscribers in the state through UNE-P. Birch's long term business plans include the ultimate transition of its UNE-P customer base to facilities-based service using softswitches.

Ernest Communications ("Ernest") has been providing service in Tennessee for over a year and half. Ernest focuses on providing a competitive alternative to the payphone service provider market and currently has 2,000 UNE-P lines in service to PSPs.

NewSouth Communications is primarily a facilities-based provider serving larger business customers over digital facilities. In Tennessee, NewSouth uses UNE-P to reach analog customers that it cannot economically serve using its own switching facilities.

Z-Tel Communications ("Z-Tel") is a leading competitive provider of service to the residential market. Z-Tel combines UNE-P with its own unique suite of intelligent calling and messaging features that integrate voicemail and email into a single messaging center that can be accessed either by phone or over the Internet.

III. UNE-P Is the Only Economical Way to Serve Mass Market Customers Who Would Otherwise Be Denied the Benefits of Competition

UNE-P is the only sure way of economically providing competitive service to the mass market. Switch-based competitive service is generally uneconomical unless the customer is large enough to have a high capacity digital loop, such as a DS-1 (which is the equivalent of 24 analog voice lines). This is the case because of the costs involved in converting customers served through individual loops. Each individual loop must be manually "cutover" from the ILEC to the CLEC, a process that requires very labor-intensive coordination between the two companies and which has proven to be fraught with trouble. Only when a customer is being served by a DS-1 or other digital facility that the volume of service being provided to the customer is sufficient to overcome the impairment of cutting over the loop.⁷

In addition to the fundamental economics, UNE-P is the only entry vehicle suited to reaching the mass market because of the ubiquitous coverage it allows. Switch-based competition requires a concentration of potential large customers with sufficient demand to warrant installation of a switch; UNE-P can be used wherever there is a customer desiring

⁷ As for resale, it is proving generally not to be a viable mode of competitive entry, except for reaching customers at the margin or as a transition mechanism to UNE-P or switch-based service.

competitive service. UNE-P thus offers customers in smaller cities and rural areas the same access to competitive choice as enjoyed by those in metropolitan areas. In Tennessee, this means that UNE-P providers are serving customers not just in Nashville, but also in smaller towns and cities like Athens, Bolivar, Middleton, and Pulaski.

Aside from the ubiquity of coverage it allows, UNE-P has numerous other characteristics that make it the ideal vehicle for serving mass market customers. Those include

- **Product flexibility.** Unlike resellers, UNE-P providers are able to combine their basic local exchange offerings with their own facilities and innovative packages of value-added services. For example, Z-Tel Communications provides its residential customers with a sophisticated integrated messaging platform.
- **Marketplace flexibility.** UNE-P offers CLECs a tremendous amount of flexibility in entering the local market. UNE-P can be used as a stand-alone vehicle for market entry, as a means of entering a market to build the customer base and develop the necessary economies of scale in order to transition to switch-based service, as a platform on which to layer other services, or as any combination of these.
- **Rapid marketplace penetration.** Because UNE-P market entry does not have the substantial lead times required for switch-base entry, UNE-P providers can focus on developing marketing channels, customer-care systems, and developing the myriad of skills needed to become a successful local exchange provider.

IV. **The Rapid Growth of UNE-P-Based Mass Market Competition**

The best proof of the benefits of UNE-P is the impact it has had on mass market competition. It is the principal engine creating competition for smaller business customers and is the only market entry vehicle that offers the possibility of widespread residential competition. As discussed in the attached Direct Testimony of Joseph Gillan ("Gillan Direct"), even though BellSouth only began making UNE-P available in early 2000, by the middle of last year, UNE-P accounted for 85.8% of the net growth in local competition in Tennessee. Gillan Direct at 7. Over that period, for every end user line converted from BellSouth to a switch-based CLEC, nearly four end user lines were converted to UNE-P. *Id.*

Of course, since most switch-based CLECs generally do not serve mass market customers (focusing instead on larger businesses desiring digital services), the 85% overall growth figure does not fully capture the effect that UNE-P has had on the mass market of residential and small business customers. Almost all of the competitive growth in those sectors in Tennessee has come from UNE-P.

Because BellSouth resisted UNE-P as long as it did, UNE-P based competition has not advanced as far in the BellSouth region as it has in some other states where UNE-P was available earlier. Texas and New York are good examples. In both those states, the respective state commissions took the lead in requiring the ILEC to make UNE-P available without the federal restrictions. And in both those states, mass market competition has developed more rapidly than in other states. Gillan Direct at 9, 10. In New York, an astonishing 14.5% of end user lines are served by CLECs using UNE-P. This accounts for nearly 75% of the total lines served by CLECs. In Texas, 13.3% of end user lines are served through UNE-P, accounting for just over 75% of competitive lines. *Id.*

V. The UNE-P Regulatory Framework

A. The Current Status of Switching Under the FCC's Rules

As discussed above, the one exception to the availability of the UNEs necessary for UNE-P is the restricted availability of switching in the top 50 metropolitan areas. Specifically, under the FCC's rule, ILECs are not required to make switching available as a UNE in access density zone 1 (which corresponds roughly to the downtown business districts) of the top 50 metropolitan statistical areas (including Nashville) in the country for service to customers with

four or more lines.⁸ The FCC found that four lines represented the demarcation between “mass market” residential and small business customers and medium and large businesses.⁹

B. The Role of the States

While the FCC has adopted a national list of UNEs and established certain minimum obligations that the ILECs must meet, the states are free to go further. As the FCC found in its order adopting the national list of UNEs, “section 251(d)(3) of the Communications Act grants state public utility commissions the authority to impose additional obligations upon incumbent LECs beyond those imposed by the national list, as long as they meet the requirements of section 251 and the national policy framework instituted in this Order.” *FCC UNE Order* ¶ 154. In short, the FCC’s national list is a floor, not a ceiling. States remain free to add to the FCC’s national list.¹⁰

⁸ The FCC also conditioned the ability of ILECs to refuse to provide switching as a UNE on their having made available the so-called “enhanced extended loop,” or “EEL.”

⁹ The FCC failed to explain how the four-line cut-off is related to the ability of CLECs to economically provide service. In fact, as discussed above, it becomes possible to serve a customer economically through unbundled switching only where the customer is large enough to be served through a DS-1 or other high capacity loop rather than through individual analog lines.

¹⁰ Numerous states have interpreted Section 251(d)(3) as allowing them to add UNEs to the national list, including UNEs that the FCC previously declined to place on the list. *See, e.g. Joint Application of Sprint Communication Company, L.P., United Telephone Company of Kansas, United Telephone Company of Eastern Kansas, United Telephone Company of South Central Kansas, and United Telephone Company of Southeastern Kansas for the Commission to Open a Generic Proceeding on Southwestern Bell Telephone Company’s Rates for Interconnection, Unbundled Elements, Transport and Termination, and Resale*, Docket No. 97-SCCC-149-GIT, 14 (Kan. PUC 2000) (the Kansas Corporation Commission determined that it has the authority to conduct an impairment analysis to add OS/DA to the national list, although declined to do so on the merits); *Petition for Arbitration of the Interconnection Agreement between BellSouth Telecommunications, Inc., and Intermedia Communications, Inc., Pursuant to Section 252(b) of the Telecommunications Act of 1996*, Docket No. 27385 (Al. PSC 2001) (“[T]his Commission has the ability to require the unbundling of packet switching and frame relay if it determines that a competitor is impaired without such requirement.”); *ICG Telecom Group, Inc.’s Petition for Arbitration of Interconnection Rates, Terms, and Conditions, and Related Arrangements with Ameritech Ohio*, Case No. 99-1153-TP-ARB (Ohio. PUC 2000) (adding the EEL as a new UNE to the FCC’s national list after conducting an impairment analysis).

VI. The TRA Should Declare Switching an Unrestricted UNE to Ensure the Continued Availability of UNE-P

To ensure the continued viability of UNE-P, and thus of mass market competition in Tennessee, the TRA should declare switching an unrestricted UNE. In order to do so, the TRA should initiate a contested case proceeding pursuant to T.C.A. § 65-5-209(d).

VII. Procedural Matters

T.C.A. § 65-5-209(d) delineates a timetable for resolution of this matter. A hearing is required within 30 days, and a decision by the Authority 20 days thereafter. Accordingly, the UNE-P Coalition suggests the following procedural schedule:¹¹

February 25, 2002	Contested case petition filed, along with Tennessee UNE-P Coalition direct testimony
March 11, 2002	BellSouth testimony filed
March 18, 2002	Coalition rebuttal testimony filed
March 25, 2002	Hearing
March 29, 2002	Post-hearing briefs filed
April 8, 2002	Initial decision
April 11, 2002	Exceptions to initial decision filed
April 18, 2002	Final decision

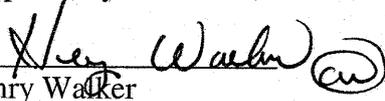
To assist the Authority in meeting those deadlines, the Authority may wish to assign this matter to a hearing officer to hear the matter and render an initial decision on the merits, subject to the Authority's review. Whether or not the matter is referred to a hearing officer, the Coalition is willing to work with the Authority to make appropriate modifications to the schedule, including, if necessary, reasonable waiver of the statutory timetable.

VIII. Conclusion

For the foregoing reasons, the Tennessee UNE-P Coalition respectfully submits that the Authority open a contested case proceeding to address the issues raised in this petition.

¹¹ This schedule does not provide for any discovery. Certain limited discovery may be appropriate in this proceeding, necessitating a revision to the schedule.

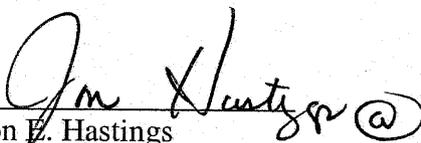
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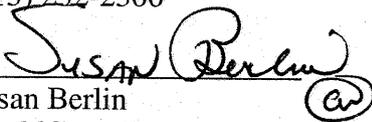

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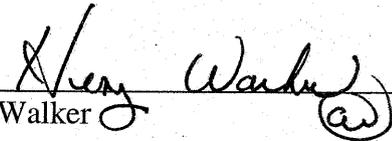
Attorneys for *WorldCom*

February 25, 2002

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been forwarded via fax or hand delivery and U.S. mail to the following on this the 25th day of February, 2002.

Guy Hicks, Esq.
BellSouth Telecommunications, Inc.
333 Commerce St., Suite 2101
Nashville, TN 37201-3300


Henry Walker

**BEFORE THE
TENNESSEE REGULATORY AUTHORITY**

**In the Matter of Petition Of Tennessee)
UNE-P Coalition To Open Contested Case)
Proceeding To Declare Unbundled) Docket No. _____
Switching An Unrestricted Unbundled)
Network Element)**

**DIRECT TESTIMONY OF
JOSEPH GILLAN
ON BEHALF OF
THE TENNESSEE UNE-P COALITION**

Table of Contents

I.	Introduction.....	1
II.	The Importance of Local Switching to Local Competition	7
	a) The Status of Local Competition in Tennessee	7
	b) The Special Importance of the Mass Market	11
III.	The Unbundling Framework.....	17
	a) The Unbundling Standard	17
	b) The Impairment Analysis	21
	c) The Recommended Unbundling Rule for Local Switching	31
	d) Other Factors Supporting Unbundling.....	35
IV.	Conclusion.....	44

I. Introduction

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Q. Please state your name, business address and occupation.

A. My name is Joseph Gillan. My business address is P. O. Box 541038, Orlando, Florida 32854. I am an economist with a consulting practice specializing in telecommunications.

Q. Please briefly outline your educational background and related experience.

A. I am a graduate of the University of Wyoming where I received B.A. and M.A. degrees in economics. From 1980 to 1985, I was on the staff of the Illinois Commerce Commission, where I had responsibility for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry. While at the Illinois Commission, I served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing the National Regulatory Research Institute.

In 1985, I left the Illinois Commission to join U.S. Switch, a venture firm organized to develop interexchange access networks in partnership with independent local telephone companies. At the end of 1986, I resigned my

**Direct Testimony of Joseph Gillan
On Behalf of the Tennessee UNE-P Coalition
Docket No. _____**

1 position of Vice President-Marketing/ Strategic Planning to begin a consulting
2 practice. Over the past twenty years, I have provided testimony before more than
3 35 state Commissions (including Tennessee), five state legislatures, the
4 Commerce Committee of the United States Senate, and the Federal/State Joint
5 Board on Separations Reform. I currently serve on the Advisory Council to New
6 Mexico State University's Center for Regulation.

7
8 **Q. On whose behalf are you testifying?**

9
10 A. I am testifying on behalf of the Tennessee UNE-P Coalition, a broad group of
11 competitive local exchange carriers (CLECs) interested in offering service to
12 consumers and businesses throughout Tennessee. The Coalition includes Birch
13 Telecom of the South Inc., Ernst Telecommunications, Inc., Access Integrated
14 Networks, Inc., Z-Tel Communications, MCI metro Access Transmission
15 Services, LLC and MCI WorldCom Communications Inc. (collectively
16 WorldCom).

17
18 **Q. What is the purpose of your testimony?**

19
20 A. The purpose of my testimony is to recommend that the Tennessee Regulatory
21 Authority require BellSouth offer unbundled local switching to CLECs seeking to
22 serve any analog line customer (residential and business) throughout Tennessee.

**Direct Testimony of Joseph Gillan
On Behalf of the Tennessee UNE-P Coalition
Docket No. _____**

1 Unbundled local switching is vital to competition for these conventional phone
2 customers, which continue to comprise the core of the local phone market. Local
3 competition in Tennessee remains in its infancy, but market data clearly
4 demonstrates that the path to a competitive future depends on access to this
5 critical network element – local switching was responsible for more than 85% of
6 the net growth in competitive local exchange lines in Tennessee last year.¹
7

8 Access to unbundled local switching -- and the UNE platform (i.e., UNE-P) that it
9 makes possible -- has shown a remarkable ability to bring local competition to
10 underserved markets, while at the same time promoting innovation, accelerating
11 the deployment of advanced data services, and providing a solid foundation for
12 capital investment. The Authority may assure, under both state and federal law,
13 that local competition continues to expand in Tennessee, and it should do so by
14 ordering BellSouth to offer unbundled local switching (subject to the limitation
15 described more fully below) throughout the State.²
16

17 **Q. How is your testimony organized?**

¹ Data as of June, 2001, based on BellSouth Form 477 response filed with the FCC and BellSouth's response to AT&T 1st Interrogatories, Docket 97-000309. Estimate excludes lines used to serve Internet Service Providers.

² I am also recommending that the Authority order BellSouth to give this Authority notice so that the Authority will have the opportunity to intervene before BellSouth withdraws any network element in Tennessee in the future. This will enable the Authority to remain in control of unbundled access in Tennessee, thereby preventing any unintended backsliding in competitive conditions.

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A. My testimony is organized into two basic Sections. Section II of my testimony summarizes the status of local competition in Tennessee, demonstrating the critical role played by local switching to development of that competition. This analysis of actual market conditions is useful because it underscores just how important the local switching network element is to overcoming those impairments that otherwise frustrate entry. In addition, I explain the particular importance that the Authority should place on “mass market” competition, which lies at the heart of Tennessee’s telecommunications market.

Section III of the testimony provides the unbundling analysis itself. As I indicated above, the Authority may order BellSouth to offer unbundled local switching under both state and federal law.³ Under federal rules, the Authority may order BellSouth to offer local switching as a network element if the Authority determines that entrants would otherwise be “impaired.”⁴ While the Tennessee law would permit additional unbundling (i.e., beyond the federal minimums) without an impairment finding,⁵ the testimony clearly demonstrates

³ Because I am not an attorney, my testimony is subject to the standard caveat that I am not offering a legal opinion.

⁴ See Third Report and Order and Fourth Further Notice Of Proposed Rulemaking, In the Matter of Implementation of the Local Competition Provision of the Telecommunications Act of 1996, CC Docket No. 96-98, Adopted September 15, 1999, Released November 5, 1999 (“UNE Remand Order”).

⁵ See T.C.A., 65-4-124(a).

1 that entrants would be impaired without the unbundling being requested.

2 Consequently, the testimony provides the Authority the evidence necessary to
3 unbundle local switching under *either* federal law or state law (and I recommend
4 the Authority do so under *both*). The effect of my recommendation would be to
5 make sure that unbundled local switching is available to serve any analog line in
6 Tennessee,⁶ as well as remove uncertainty as to the availability of this critical
7 element in the future.

8
9 **Q. Before you turn to a specific discussion of these issues, do you have a few**
10 **preliminary comments that you would like to make?**

11
12 A. Yes. This proceeding is important in a number of ways. First, of course, it will
13 decide the choices – and ultimately prices – available to Tennessee consumers and
14 businesses. Equally important, however, the proceeding will fundamentally
15 decide whether those choices are determined in Washington, D.C., when the FCC
16 adopts national minimum requirements, or here in Tennessee through the action
17 of this Authority. There is a well-known phrase that “all politics are local.” Such
18 a view is even truer as it relates to local competition – when it comes to
19 addressing local conditions, this Authority is far closer to the issue than any
20 federal agency can possibly be.

⁶ As I will explain later in this testimony, BellSouth is currently not required to offer unbundled local switching when used to serve customers with more than 3 lines in certain end offices in Nashville.

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I fully expect that BellSouth will try to convince the Authority that the FCC should decide which network elements should be offered in Tennessee, pointing to the FCC's recently initiated "triennial review" proceeding.⁷ There is nothing the FCC will learn about Tennessee in that proceeding, however, that the Authority does not already know (or will learn though the testimony here).⁸ Consequently, the FCC's proceeding (which can do no more than establish minimum obligations in any event) should not discourage the Authority from applying its own judgment as to what should be offered in Tennessee.

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Second, the complexity of the testimony (while necessary to address the technical aspects of federal impairment standard) should not blind the Authority to one controlling fact: There is only one entry strategy (UNE-P) that has demonstrated, through *actual* market results, the ability to support mass-market competition. If BellSouth can stop competition from developing in this core market, then the competitive evolution in other market segments can be forestalled as well. Congress did not just *hope* that local competition would result from the

⁷ *In the Matter of Review of Section 251 Unbundling Obligations of Local Exchange Carriers*, CC Docket No. 01-339, *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, and *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, *Notice of Proposed Rulemaking*, (released December 20, 2001).

⁸ In addition, the FCC will not have the benefit of cross examination to inform its opinions, nor will it be able to consider the balance the Tennessee legislature struck when it granted

1 Telecommunications Act of 1996 – it *bet* the future of all competition that the
2 local market would become competitive. With packaging (and long distance
3 authority), BellSouth will quickly transform the Tennessee market to an
4 integrated monopoly.⁹ All that stands in its way is robust local competition.

5
6 **II. The Importance of Local Switching to Local Competition**

7
8 *(a) Status of Local Competition in Tennessee*

9
10 **Q. How important is unbundled local switching to the level of local competition**
11 **in Tennessee?**

12
13 A. Unbundled local switching is critical to the development of local competition in
14 Tennessee. Even though BellSouth only began providing UNE-P in early 2000,¹⁰
15 by the middle of last year it was responsible for more than 85% of the net growth
16 in local competition in the State (see Table 1 below). Given the relatively low
17 CLEC penetration in Tennessee – CLECs serve just 5.2% of the conventional

BellSouth's desire for reduced regulation with unbundling and interconnection rules intended to promote competition.
⁹ The latest statistics from Texas continue to underscore this concern. Even in Texas, where local competition is further advanced than Tennessee, SBC has captured 35% of the long distance market in less than two years.

¹⁰ See Letter from Kathleen Levitz to Magalie Roman Salas, Secretary, Federal Communications Commission, CC Docket No. 96-98, October 13, 2000.

1 end-user lines here – the ability of UNE-P to more rapidly introduce competition
2 is key.

3 **Table 1: Importance of UNE-P to Local Competition in Tennessee¹¹**
4

Entry Strategy	Dec-00	Jun-01	Growth	% of Net Growth
Resale	52,655	51,011	-1,644	-9.5%
UNE-L (Loops w/o Switch)	47,739	51,721	3,982	22.9%
UNE-P (Loops w Switch)	15,778	30,674	14,896	85.8%
Other ¹²	10,423	10,552	130	0.7%
	126,595	143,958	17,364	

5
6 **Q. Is unbundled local switching being used to serve both residential and
7 business customers in Tennessee?**

8
9 **A.** Yes. Unbundled local switching is critical to competition for both residential and
10 (generally analog) business customers. Based on data as of May 2001, unbundled
11 local switching in Tennessee is roughly split 25% (residential) and 75%
12 (business).¹³

13
14 **Q. Is there other data that demonstrates how critical unbundled local switching
15 is to local competition?**

¹¹ Source: BellSouth Form 477 Responses to FCC.

¹² Estimate of conventional end-user lines connected to CLEC switches, less the number of UNE-Loops. Estimate developed by dividing originating CLEC minutes (Source: BellSouth Response to AT&T 1st Interrogatories, Item #5, Docket 97-00309) by BellSouth's average intraLATA usage/line (Source: ARMIS 43-04).

¹³ Source: BellSouth Exhibit DS-1, Docket 97-00309, July 30, 2001.

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A. Yes. It is instructive to compare the relative position Tennessee to the national leaders, New York and Texas.¹⁴ A look inside the data reveals that the principal difference between Tennessee and these states is the relatively more mature development of UNE-P in New York and Texas. As I indicated earlier, BellSouth stiff-armed this entry strategy until early in 2000, delaying its benefits for at least four years. One consequence of this policy has been to retard competitive development in the Southeast generally, including Tennessee.

**Table 2: Relative Penetration Rates of
UNE-P and Other Entry Strategies¹⁵**

	Resale	UNE-P	UNE-L	Total
New York	3.0%	14.5%	2.2%	19.7%
Texas	3.3%	13.3%	1.1%	17.7%
Average	3.1%	14.0%	1.7%	18.8%
Tennessee	1.8%	1.2%	1.6%	4.6%

As Table 2 shows, Tennessee is not significantly different from New York and Texas in the penetration achieved by resale and UNE Loops. What sets Texas and New York apart from Tennessee is the penetration of UNE-P.

¹⁴ No doubt BellSouth will claim (as usual) that the status of local competition in New York and Texas is the result of Verizon and SBC obtaining interLATA relief. I do not intend to debate this point here, however, despite how vehemently I disagree with the premise, and despite the wide evidence that such interLATA relief is not casually tied to local competition.

¹⁵ Source: *Assessing the Effectiveness of Section 271 Five Years After the Telecommunications Act of 1996*, Daniel R. Shiman and Jessica Rosenworcel, October 2001. Because the source data used by these authors differs from that in my testimony, there is slight difference in the reported CLEC penetration rates.

1 It is also useful to note that local switching has been shielded from the federal-
2 restriction (i.e., the “3 line limitation”) in Texas by the pro-competitive policies of
3 the Texas Commission and, at least to my knowledge, the federal-restriction was
4 never implemented in New York. Moreover, the New York Commission has
5 before it a joint Staff/Verizon settlement proposal that would require that Verizon
6 offer local switching to serve any business customer with 18 lines or less,¹⁶
7 thereby assuring that local competition can continue to develop in that State. If
8 Tennessee wants to “catch up” to these national leaders, then it must make sure
9 that BellSouth continues to offer unbundled local switching here.

10
11 **Q. Why are the penetration rates for UNE-P so impressive?**

12
13 **A.** UNE-P is successful because it addresses each of the most critical impairments
14 that would otherwise frustrate entrants seeking to offer “mass market” services.
15 These barriers include the fundamental operational problems and costs associated
16 with reconfiguring a customer’s service to an “external” switch (i.e., a switch that
17 is not already pre-connected to all the serving loops), as well as the need to offer
18 ubiquitous alternatives to compete for “mass-market” customers across the vast
19 exchange network. I will address the question of impairment in far more detail
20 later in my testimony. In that analysis, I will explain why access to unbundled

¹⁶ See Joint Proposal Concerning Verizon Incentive Plan, Case 00-C-1945, February 8, 2002.

1 local switching is particularly critical to mass market competition and, in fact, will
2 provide an impairment analysis that is specific to mass market customers. Before
3 I turn to that analysis, however, it would be useful to first discuss what I mean by
4 the “mass market.”

5

6

(b) The Special Importance of the Mass Market

7

8 **Q. What do you mean by the term “mass market.”**

9

10 **A.** Although no precise definition of mass market exists,¹⁷ mass market
11 telecommunications services are generally those that are:

12

13 * Designed to appeal to a broad cross section of customers.
14

15 * Provisioned under month-to-month arrangements, not
16 requiring contractual term commitments from the customer.
17

18 * Supported by systems intended to accommodate routine
19 changes (such as customer moves) with little or no service
20 disruption.
21

¹⁷ The FCC recognized that there were differences between mass market and specialized business services, but lacked the record to more fully define the distinction (UNE Remand Order ¶ 291).

**Direct Testimony of Joseph Gillan
On Behalf of the Tennessee UNE-P Coalition
Docket No. _____**

1 * Offered across a broad footprint, with little change in
2 product design and/or pricing to reflect unique geographic
3 circumstances.
4

5 * Provided at a relatively low margin per customer, with
6 profitability achieved through volume.
7

8 **Q. Is analog phone service an example of a mass market service?**

9
10 A. Yes. Most analog phone services – whether sold to businesses or residences –
11 are, from an engineering and provisioning standpoint, standardized arrangements.
12 These services are typically provisioned through automated systems that quickly,
13 reliably and inexpensively activate service, change features and process changes.
14 These are *common* services that residences and businesses alike have come to
15 expect to be offered without term contracts or handcrafting.¹⁸
16

17 **Q. Why is the mass-market concept important?**

18
19 A. I emphasize the mass market because the mass market remains the core of the
20 BellSouth monopoly. Switched services account for more than 80% of
21 BellSouth's regulated revenues in Tennessee,¹⁹ and analog lines (which represent

¹⁸ This is not to say, of course, that such services are impervious to innovation. To the contrary, consumers and businesses demand that competitors differentiate their services from those of the incumbent, for otherwise they have no reason to change providers.

¹⁹ Source: ARMIS 43-03 (Regulated Revenues), totaling the following revenue categories: Basic Area, Optional Extended, End User, Switched Access, State Access, LD Message and Other Local.

1 the core of the mass market) are more than 90% of BellSouth's switched lines.²⁰

2 As a result, competition for the typical user – the residential customer, the
3 shopkeeper, the small business – is not only important to these customers
4 themselves, but to competition more generally as well. If this core market is
5 denied competitive choice, BellSouth's resulting monopoly would provide it a
6 reservoir of revenues and captive customers that it could leverage against
7 providers of more specialized services.

8
9 Second, in a future where customers clearly desire packages of services,
10 BellSouth's market power for local service will provide it an advantage in related
11 markets as well. For instance, consider the significance of the following statistics
12 announced by SBC:²¹

13
14 * SBC has now achieved a 35% penetration long distance
15 penetration rate in Texas, Kansas and Oklahoma –
16 substantially more than MCI and Sprint achieved *together*
17 (roughly 22%) after more than two decades of competitive
18 effort.²²
19

²⁰ Source: ARMIS 43-08.

²¹ Source: SBC Reports 4th Quarter Earnings, January 24, 2002.

²² At the end of 1996 (approximately 20 years after MCI first introduced its Execunet Service), MCI and Sprint together had 21.9% of the market. Source: *Long Distance Market Shares* (4th Quarter 1998), Federal Communications Commission, March 1999.

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Q. Does the current federal minimum rule assure that unbundled local switching is available to serve mass market customers throughout Tennessee?

A. No. Although FCC recognized the importance of local switching to serve the “mass market,” it lacked any record basis to determine its limits:

We conclude that without access to unbundled local circuit switching, requesting carriers are impaired in their ability to serve the mass market.... No party in this proceeding, however, identifies the characteristics that distinguish medium and large business customers from the mass market.²⁶

With no evidence to guide it, the FCC nevertheless developed a rule that (under certain conditions) would permit BellSouth to deny local switching to serve customers with a few as four lines in the Nashville area. Specifically, 47 C.F.R. § 51.319(c)(2), states:

Notwithstanding the incumbent LEC's general duty to unbundle local circuit switching, an incumbent LEC shall not be required to unbundle local circuit switching for requesting telecommunications carriers when the requesting telecommunications carrier serves end-users with four or more

track market conditions, the long-term hope for a deregulated communications marketplace will be jeopardized.

²⁶ See UNE Remand Order ¶ 291.

1 voice grade (DS0) equivalents or lines, provided that the
2 incumbent LEC provides nondiscriminatory access to
3 combinations of unbundled loops and transport (also known as
4 the "Enhanced Extended Link") throughout Density Zone 1, and
5 the incumbent LEC's local circuit switches are located in:
6

7 (i) The top 50 Metropolitan Statistical Areas as set forth in
8 Appendix B of the Third Report and Order and Fourth
9 Further Notice of Proposed Rulemaking in CC Docket No.
10 96-98, and
11

12 (ii) In Density Zone 1, as defined in Sec. 69.123 of this chapter
13 on January 1, 1999.
14

15 **Q. Is this a reasonable definition of the mass market?**

16

17 A. No. As I indicated above -- and will explain in far greater detail below -- a more
18 relevant boundary for the mass market is the analog boundary. Where a customer
19 (business or residential) uses conventional analog phone service, it is part of the
20 mass-market. This is one of the reasons why the Authority should conduct its
21 own impairment analysis, informed by analysis specific to Tennessee, and tested
22 through cross-examination.
23

23

24 **Q. Do you have an estimate of how many business lines are potentially affected**
25 **by the current federal minimum rule?**

26

27 A. Yes. Based on the input data used by the FCC when it first estimated high cost
28 support, nearly 135,000 multi-line business lines are located in the 15 Nashville
29 wire centers where BellSouth would not have to offer local switching as a

1 network element under the federal minimum rule. This is approximately 20% of
2 all the business lines in the entire State. Clearly, a significant portion of these
3 customers could be denied competitive choice if BellSouth implemented the
4 federal minimum.²⁷ The Authority should conduct its own unbundling analysis to
5 make sure that the analog line customers in these exchanges are able to benefit
6 from the competition made possible by unbundled local switching. The analysis
7 below provides the evidentiary basis for that determination.

8
9 **III. The Unbundling Framework**

10
11 **(a) The Unbundling Standards**

12
13 **Q. Please summarize BellSouth's unbundling obligation.**

14
15 **A.** Although I am not an attorney (and am, therefore, not offering a legal opinion), I
16 understand that BellSouth is subject to unbundling obligations under both the
17 Telecommunications Act of 1996 and Tennessee Statute. Although the Tennessee
18 unbundling obligation is somewhat broader than that in the federal law, my
19 testimony demonstrates that even the narrower federal standard is satisfied.

²⁷ My understanding is that BellSouth has not yet implemented the restrictions on unbundled local switching permitted by the federal minimum rule (i.e., it continues to apply UNE rates to switching provisioned in these wire centers).

1 Consequently, the Regulatory Authority can order the unbundling recommended
2 here under federal law, State law, or both.

3
4 **Q. Please explain the federal unbundling framework.**

5
6 A. The federal unbundling framework has two basic layers – a list of national
7 minimum network elements (that must be offered everywhere),²⁸ and a
8 mechanism for States to require additional unbundling. Where a State requires
9 additional unbundling under the authority of the federal Act, however, FCC rules
10 require that certain standards be met.²⁹ Specifically, a State must conclude (for
11 non-proprietary network elements)³⁰ that CLECs would be “impaired” without
12 access to the network element in question.

13
14 **Q. Has the FCC provided guidance as to what constitutes “impairment”?**

15

²⁸ This list of federally mandated minimums is codified in the Code of Federal Regulations at 47 C.F.R. §51.319.

²⁹ 47 C.F.R. §51.317(b)(4) states: A state commission must comply with the standards set forth in this Sec. 51.317 when considering whether to require the unbundling of additional network elements.

³⁰ BellSouth has never claimed, to my knowledge, that any aspect of the local switching network element is proprietary.

1 A. Yes. Acting in response to the U.S. Supreme Court’s remand of its initial
2 interconnection rules, the FCC adopted rules to give greater definition to what is
3 meant by “impairment.” Under this framework, impairment is defined as follows:

4
5 A requesting carrier's ability to provide service is "impaired" if,
6 taking into consideration the availability of alternative elements
7 outside the incumbent LEC's network, including self-provisioning
8 by a requesting carrier or acquiring an alternative from a third-
9 party supplier, lack of access to that element materially diminishes
10 a requesting carrier's ability to provide the services it seeks to
11 offer. The Commission will consider the totality of the
12 circumstances to determine whether an alternative to the
13 incumbent LEC's network element is available in such a manner
14 that a requesting carrier can provide service using the alternative.³¹
15

16 Further, in judging whether alternatives (either self-provisioned or obtained from
17 a third-party) are available to the entrant, States are directed to consider whether
18 alternatives are “...available as a practical, economic, and operational matter:”

- 19
- 20 (i) Cost, including all costs that requesting carriers may incur
21 when using the alternative element to provide the services
22 it seeks to offer;
23
- 24 (ii) Timeliness, including the time associated with entering a
25 market as well as the time to expand service to more
26 customers;
27
- 28 (iii) Quality;
29

³¹ 47 C.F.R. §51.317(b)(1), emphasis added.

1 (iv) Ubiquity, including whether the alternatives are available
2 ubiquitously;
3

4 (v) Impact on network operations.³²
5
6

7 **Q. Are there other factors that the Authority may consider when determining**
8 **whether a particular network element should be offered in accordance with**
9 **the federal Act?**

10
11 **A.** Yes. The FCC also enumerated a number of other factors that a State may
12 consider when conducting an unbundling review under the federal Act, including
13 the following:

14
15 (i) Whether unbundling of a network element promotes the
16 rapid introduction of competition;
17

18 (ii) Whether unbundling of a network element promotes
19 facilities-based competition, investment, and innovation;
20

21 (iii) Whether unbundling of a network element promotes
22 reduced regulation;
23

24 (iv) Whether unbundling of a network element provides
25 certainty to requesting carriers regarding the availability of
26 the element;
27

³² 47 C.F.R. §51.317(b)(2).

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(v) Whether unbundling of a network element is administratively practical to apply.³³

Q. Does the Authority have independent authority to require additional unbundling?

A. Yes. In addition to its authority under federal law, Tennessee Statute also provides for additional unbundling obligations that go beyond federal minimums. Specifically, under Section 64-4-124(a), the authority need merely find that unbundling is technically and financially feasible, criteria that are already met by virtue of the existing unbundling requirements for local switching.

Clearly, the Authority is fully empowered to order the BellSouth to unbundle in the manner recommended below, through either (or both) federal law and federal rule, or through its independent authority under Tennessee law.

(b) The Unbundling Analysis

Q. Are entrants impaired in their ability to offer services without access to local switching?

³³ 47 C.F.R. §51.317(b)(3).

1

2 A. Yes. As indicated earlier, an entrant is impaired (in accordance with federal
3 rules) if a denial of access to that element “materially diminishes” the entrants’
4 ability to offer service. In simple terms, impairment requires a relative
5 comparison between two alternatives: (1) leasing capacity in the incumbent’s
6 switch, and (2) an externally supplied switch, either self-provisioned or obtained
7 from a third-party.³⁴ The comparison must consider the difference between these
8 alternatives in its effect on (a) the entrant’s cost, (b) speed to market, (c) quality,
9 (d) ubiquity, and (e) impact on network operations.³⁵

10

11 As I explain below, there is a clear material diminishment in the entrant’s ability
12 to offer service using “external” switches (compared to having access to capacity
13 in incumbent switches) that are not fully integrated into the local network or
14 ubiquitously deployed. This is particularly the case for mass market services that
15 depend on efficient provisioning and broad application.

16

17 **Q. Is access to local switching necessary to offer ubiquitous service?**

18

19 A. Yes. One of the characteristics that *defines* a mass market service is the need to
20 offer the service ubiquitously across a market’s entire footprint. It is simply not

³⁴ 47 C.F.R. §51.317(b)(1).

³⁵ 47 C.F.R. §51.317(b)(2).

1 possible to offer a “mass market” service with “limited” availability. There are
2 approximately 200 local switches in Tennessee, dispersed across 194 wire centers.
3 Any carrier remotely hoping to offer service with broad geographic application
4 requires access to the switching matrix that is already connected to every
5 customer’s loop, and which already offers ubiquitous coverage.

6
7 It is useful to keep in context that the existing exchange network is the cumulative
8 product of more than 100 years of investment,³⁶ during most of which the
9 incumbent was protected from competition through government edict. Moreover,
10 this *inherited* resource was deliberately subsidized, with the intended purpose of
11 establishing a geographic reach far greater than might result from standard
12 commercial incentives.³⁷

13
14 There is simply no evidence that mass market competition for analog-based
15 services is possible through any strategy other than through access to the installed

³⁶ This is not to claim that the facilities are this old, only that there is far more to establishing a local network than mere facilities-investment. There are also rights-of-way privileges, and business and community relationships that take time to establish and perfect.

³⁷ BellSouth’s inheritance of preferential access to the existing network is one of the key policy reasons for requiring that it make this network available to competitors on nondiscriminatory terms. This network asset is a unique legacy of historical circumstance – no other provider will ever enjoy the same conditions, protections and stable revenues that BellSouth was provided so as to create this resource. It is not unreasonable that a byproduct of government regulation should be shared with rivals by a refocusing of government regulation to the incumbent’s wholesale obligations.

1 switching capacity of the incumbent, at least given today's technology and
2 provisioning arrangements.

3

4 **Q. Are there cost and quality impairments that can only be addressed through**
5 **access to local switching?**

6

7 A. Yes. The unparalleled success of UNE-P as a strategy to serve the analog mass
8 market can be attributed to its efficiency at handling large volumes at low
9 transactions cost. This is particularly important for mass market services where
10 customers do not typically commit to term contracts, and where service-initiation
11 costs and churn can have a large effect on profitability.

12

13 It is important to appreciate that the incumbent's local switch enjoys a number of
14 legacy advantages due to its integration into the exchange network. These
15 advantages include ubiquity (discussed above) and, just as importantly, the ability
16 to migrate customers between different providers through automated provisioning
17 systems. In contrast, external switches (whether self-provisioned or obtained
18 from a third party) require manual handcrafting of *every* connection, a process
19 that is more expensive, unreliable and inherently capacity-constrained.

20

21 Because of the problems *inherent* to manual processes, communications
22 companies have expended substantial resources developing systems and

1 equipment to support automated provisioning. Manual activity is expensive and
2 unavoidably unreliable -- a fact confirmed by the emphasis throughout our
3 economy on replacing routine tasks with automated systems whenever, and
4 wherever, possible. Manual provisioning systems should be viewed as exceptions
5 to this principle, not a prerequisite for local competition.³⁸

6
7 **Q. What are some of the quality issues associated with manual provisioning?**

8
9 A. The very nature of manual provisioning means customers are subject to service
10 disruptions – disruptions that can only be minimized by additional human
11 involvement and cost. Customer disruptions include a loss in service, the
12 disconnection of calls underway, and the possibility that inbound calls will not be
13 successfully routed. While these concerns may be less relevant in product
14 markets where customers expect the additional complexities of manual
15 provisioning, conventional analog phone services *are not that market*. Consumers
16 have long grown accustomed to the efficient delivery of phone service through
17 automated systems that typically provide service within hours of the customer's
18 request.

19

³⁸ Certainly, where manual provisioning is necessary to a particular entry strategy (such as strategies that employ a self-provisioned local switch), the Authority should remain diligent that the process be made as efficient, reliable and cost-effective as possible. There is a large difference, however, between relying on manual systems *where necessary*, and *making necessary* the manual systems as a prerequisite to entry. The former recognizes the process as a “necessary evil,” while the latter makes the “evil necessary.”

1 **Q. Are there substantial cost differences created when an entrant is forced to**
2 **use an externally-supplied switch?**

3
4 A. Yes. As indicated earlier, BellSouth has installed 200 local switches in
5 Tennessee. Although an entrant could “theoretically” serve the market with fewer
6 total switches, the reality is that loops already terminate at the existing BellSouth
7 switch. These means that the entrant’s cost to duplicate BellSouth’s “switch
8 matrix” includes additional costs for collocation and backhaul to extend each of
9 these loops to an external switch, even if that switch “in theory” has spare
10 capacity available to serve more lines. The practical reality is that these
11 backhaul/aggregation costs only make sense for larger customers (at least DS-1),
12 and only in those central offices where sufficient penetration is expected to justify
13 collocation.

14
15 Moreover, the additional transactions cost for each and every line – i.e., the non-
16 recurring charges paid to BellSouth for its manual provisioning – are substantial.
17 The non-recurring cost to migrate a single analog loop to an entrant’s collocation
18 in Tennessee (with coordination) is \$66.28³⁹ while the cost to migrate an existing
19 loop/port combination is only \$1.03, a reduction of more than 98%. Moreover,
20 this cost differential does not include *any* of the additional costs of the

³⁹ This is the per-loop NRC (for a Service Level 1 Loop) with a NRC for a Specified-Time conversion.

1 collocation, the backhaul or switching incurred by the entrant – it is simply the
2 additional transaction cost *paid* to BellSouth for the migration itself.

3
4 **Q. Are these transactions costs particularly relevant to mass market strategies?**

5
6 A. Yes. It is important to appreciate the very real barrier presented by customer-
7 migration costs on mass market competition. To begin, as the incumbent,
8 BellSouth does not incur any non-recurring cost to *keep* the customer – by their
9 very nature, customer migration costs are additional costs incurred by an entrant
10 seeking to win customers from BellSouth that BellSouth avoids through the
11 inherited advantage of incumbency. Consequently, non-recurring costs of any
12 level directly translate to a competitive advantage.

13
14 In addition, these additional costs are a material disadvantage, particularly (as
15 discussed here) as they relate to mass market services. The average revenue per
16 switched line for BellSouth in Tennessee last year was \$43.57 per month.⁴⁰

17 Assuming a net profit margin of 10% -- a statistic that must be assumed because
18 no CLEC attempting a manual-migration strategy is (to my knowledge) operating
19 profitably -- it would take 15 months before just the increase in non-recurring cost

⁴⁰ Source: ARMIS 43-03, Table 1, summing Basic Local Revenues, Extended Area Revenues, Other Local Revenues, End User Access Revenues, Switched Access Revenues, State Access Revenues and LD Message Revenues.

1 (that is, the difference between the NRC for an UNE-P and the NRC for a loop
2 migration) is recovered.

3

4 Given the substantial and material barrier presented by non-recurring costs – costs
5 that can be avoided by the electronic migration made possible by UNE-P – it is no
6 wonder that the Authority sees so little competition for analog customers from
7 other strategies.

8

9 **Q. Are entrants also impaired with respect to timeliness and the impact on
10 network operations if they are denied access to local switching as a network
11 element?**

12

13 A. Yes. First, there is no question that local competition is accelerated, by several
14 years or more, through access to unbundled local switching. Even though
15 BellSouth delayed the availability of UNE-P, it nevertheless achieved in roughly
16 one year a competitive penetration that UNE-Loops (with CLEC provided local
17 switching) achieved after four years.⁴¹

18

19 Not only does UNE-P promote more competition faster – not to mention
20 competition for those customers that would otherwise have no choice -- the

⁴¹ Comparing June 1999 (BellSouth's Response to the FCC's Fifth Survey on Local Competition) to BellSouth's Form 477 Responses to the FCC for June 2001.

1 availability of UNE-P frees resources (such as collocation space and technicians
2 to coordinate loop cutovers) to more effectively supply stand-alone loops where
3 desired. In addition, for entrants seeking to offer customers packages that
4 combine analog phone service with other capabilities (such as Web design or
5 advanced data services), access to unbundled local switching frees capital and
6 internal resources to develop these complementary capabilities.

7
8 **Q. Do incumbents understand the importance of combinations such as UNE-P**
9 **to mass market competition?**

10
11 A. Yes. The importance of network element combinations to local competition is
12 well understood as well by the incumbent local telephone industry. No less
13 incumbent-oriented publication than the United States Telecom Association's
14 own magazine observed that individual network elements will be difficult to use
15 at volume:

16
17 Because of their fragmentary nature, UNEs will be
18 operationally difficult to order and to provision on both sides.
19 Product packages that comprise appropriate and pre-set UNE
20 combinations could reduce some of the difficulties.⁴²
21

⁴² *Wholesale Marketing Strategy*, Salvador Arias, *Teletimes*, United States Telephone Association, Volume 12, No. 3, 1998.

1 Not surprisingly, whenever an incumbent confronts the same impairments that
2 frustrate entrants – that is, how to offer local service on a competitive basis like an
3 entrant -- they reach the same answer as I have described here: UNE-P. For
4 instance, SBC revealed during the review of its merger with Ameritech that its
5 out-of-region entry strategy was premised on the use of network element
6 combinations to serve the residential and small business market.⁴³ Further, in
7 Pennsylvania, Bell Atlantic was ordered to file a plan to separate its operation into
8 wholesale and retail affiliates. As part of that filing, Bell Atlantic (now Verizon)
9 proposed to use UNE-P as its principal entry strategy.⁴⁴ If the Authority desires
10 mass market competition, then it must make sure that the impediments to mass
11 market competition are identified and corrected; most specifically, by making the
12 appropriate network elements available.

13
14 **Q. Do the above impairments also apply to digital services as well?**

15
16 **A.** Yes. Each of the impairments listed above also affect digital services; the
17 difference is more a matter of degree than whether the impairment applies. There
18 is, however, one material set of differences – higher speed digital services are
19 more commonly sold under term contracts and customers are already accustomed

⁴³ See Deposition and Testimony of James Kahan on behalf of SBC, Public Utilities Authority of Ohio, Case No. 98-1082-TP-AMT.

⁴⁴ See Re Structural Separation of Verizon Pennsylvania Inc. Retail and Wholesale Operations, Pennsylvania Public Utility Authority, Docket No. M-00001353.

1 to manual provisioning (even when the customers obtain service from the
2 incumbent).

3
4 These factors tend to diminish the importance of provisioning-related
5 impairments, but do not lessen barriers related to market size, timing, or the sheer
6 size of the local network. Consequently, while analog services are unequivocally
7 impaired without access to local switching throughout the market – at least until
8 switching and backhaul costs are reduced significantly and, equally important,
9 loop-provisioning systems are automated to accommodate the commercial
10 volumes on the scale supported by UNE-P and at a comparable cost – high-
11 capacity digital services may not require access to local switching, at least in
12 some areas.

13
14 **(c) The Recommended Unbundling Rule for Local Switching**

15
16 **Q. What unbundling rule do you recommend?**

17
18 A. The above analysis demonstrates that entrants are impaired without access to local
19 switching to serve analog lines (which today define the “mass market”).
20 Replicating the incumbent network to achieve the ubiquity so central to mass
21 market services is simply not feasible; moreover, manual provisioning and its
22 attendant costs and reliability problems make access to the existing switch fabric a

1 threshold requirement to competition in this market. Significantly, none of these
2 problems are materially improved if a customer happens to be located in a large
3 city or has more than a few lines. There is no *less* impairment to serve analog
4 customers in dense markets than there is anywhere else, and there is nothing to be
5 gained (but significant competition to be lost) by arbitrarily limiting analog
6 availability based on geography⁴⁵ or the number of analog lines at a particular
7 location. Therefore, I recommend that the Authority find that competitors are
8 materially diminished in their ability to compete for analog customers throughout
9 Tennessee without access to unbundled local switching, irrespective of the
10 customer's location or number of analog lines.

11
12 **Q. What is your recommendation with respect to high-speed digital services?**

13
14 **A.** The principal impairments to offering digital services are the cost and time to
15 install a switch, and the additional backhaul/transport costs to establish a
16 sufficiently large base of customers to achieve profitability. Given that the CLEC
17 industry does not yet have a profitable subset of such switch-based CLECs to
18 evaluate, it is impossible to rely on actual commercial activity to estimate just

⁴⁵ Indeed, attempting to cut "holes" in the availability of local switching (as is done in the FCC's national minimum list) ignores the critical importance of ubiquity to the very mass market entry strategies that UNE-P makes possible.

1 how dense a market must be offset these impairments, nor how much capital a
2 CLEC must raise in order to survive long enough to reach profitability.

3
4 One can reasonably assume (perhaps hope), however, that where an efficient
5 aggregation capability exists, areas of Nashville may be able to sustain
6 competition for digital services if the concentration of DS-1 (and above)
7 customers is sufficiently great.⁴⁶ While the presence of such an “impairment
8 point” may be theoretically easy to assume, there is not yet reliable data that can
9 be used to prove where the threshold exists. That is, the Authority may feel
10 reasonably comfortable in concluding that there are *some* areas where the
11 concentration of large customers is sufficiently dense to eliminate impairment (at
12 least for those large customers), but identifying precisely *where* that threshold is
13 satisfied remains cloudy.

14
15 **Q. What do you suggest?**

16
17 **A. To begin, I recommend that the Authority approach the task of designing a**
18 limitation that would deny entrants access to local switching, even for large
19 digital customers, with caution. As I indicated, there is little evidence that current
20 conditions provide entrants the scale needed to reach profitability. Consequently,

⁴⁶ Given the absence of CLEC profitability, and the clear pattern of overly optimistic business planning, the Authority should not merely assume that local competition for even larger digital customers is necessarily sustainable.

1 while I am recommending that the Authority limit BellSouth's obligation to offer
2 local switching when used to serve high capacity digital customers, the Authority
3 should be cautious in the design and implementation of such a limitation.

4
5 Moreover, as indicated above, entrants attempting to serve this market are
6 impaired in their ability to achieve profitable scale by the backhaul and
7 aggregation costs that limit their competitive footprint. Fortunately, in Tennessee,
8 the Authority requires that BellSouth offer the loop/transport combination known
9 as an "enhanced extended link" (EEL),⁴⁷ without any of the restrictions that
10 diminish the usefulness of the similar arrangement required by the FCC.⁴⁸

11 Because of – and *only* because of – this pro-competitive decision by the TRA, I
12 recommend a "non-impairment" finding for high-speed digital services, limited to
13 the Nashville metropolitan area. By establishing the boundary of a digital-
14 restriction in this way, the Authority will have created for itself the opportunity to
15 do a comparative analysis of competitive conditions between Nashville and other
16 areas in Tennessee at some point in the future, and use that information to decide
17 whether to expand (or eliminate) the restriction.

⁴⁷ See, for instance, Final Order of Arbitration, Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to 252(b) of the Telecommunications Act of 1996, Docket 99-00377, August 4, 2000 ("ICG Arbitration Order").

⁴⁸ Although the ICG Arbitration Order does require that a special access circuit comply with the FCC's "predominant local use" test to be eligible for conversion to a UNE combination, the Order does not indicate that any such a restriction would apply to a new loop/transport combination.

1

2 **Q. Are there any other components to your recommendation?**

3

4 A. Yes. The above recommendation presupposes that BellSouth would continue to
5 offer in Tennessee the loop and transport network elements that comprise an EEL
6 (specifically, high capacity loops and dedicated transport. To assure that this
7 condition is satisfied – and to place BellSouth on notice that the Authority intends
8 to remain engaged in promoting local competition – I recommend that the
9 Authority prohibit BellSouth from withdrawing any network element in
10 Tennessee without first giving advance notification to this Authority. The
11 Authority could then intervene if withdrawing the UNE would have untoward
12 competitive consequences. Such a requirement would remove any question that
13 the Authority intends to closely monitor local market conditions in this State and
14 is prepared to exercise its authority to prevent any premature reduction in the
15 availability of unbundled network elements in this State.

16

17 **(d) Other Factors Supporting Unbundling**

18

19 **Q. Are there other factors that the Authority may consider when deciding**
20 **whether to require that BellSouth offer local switching throughout**
21 **Tennessee?**

22

1 A. Yes. The analysis above specifically addresses how entrants are “impaired”
2 without access to unbundled local switching. Although this portion of my
3 testimony is needed to explain how the federal unbundling standard is satisfied, it
4 is also important to remember that the Authority has independent authority to
5 require additional unbundling, as well as additional flexibility to consider other
6 factors under the FCC’s rules.

7
8 At the very outset of this testimony, I presented a number of statistics that
9 demonstrated that local competition in Tennessee is increasingly linked to the
10 availability of UNE-P, particularly competition for the typical (i.e., analog)
11 residential and business customer. These choices by Tennessee business and
12 residential customers provide a compelling validation of UNE-P because each
13 decision reflects the judgment of the consumer/business itself as to what service,
14 price or package best meets its specific needs. This powerful endorsement by the
15 consumers and businesses of Tennessee cannot be overlooked.

16
17 **Q. Are there other benefits from UNE-P?**

18
19 A. Yes. Beyond the plainly visible benefit of UNE-P as the means to mass market
20 competition, it is also important to appreciate its role providing the foundation for
21 innovation and investment in the future. There is far more to learning -- much
22 less, perfecting -- the skills needed to offer local exchange service than operating

1 network facilities. A viable local provider must master a diverse set of talents,
2 most of which concern the entrants' ability to attract and satisfy customers, and
3 are unrelated to network operations per se. While an entrant using UNE-P may be
4 relying (at least initially) on the underlying network of BellSouth for the generic
5 functions of switching and transmission, that does not mean it is not investing in
6 other infrastructure crucial for local competition.

7
8 The importance of non-network skills in the local marketplace cannot be over
9 emphasized. As a practical matter, many of the innovations that attract customers
10 involve pricing and support capabilities that reside *outside* the physical network.
11 The size of the local calling area, whether a service seamlessly transitions
12 between "local and toll," the interrelationship between the local service and other
13 customer support activities (such as web design or specialized billing) are all
14 important service elements that have nothing to do with the generic switching and
15 transmission platform used to transmit calls. UNE-P enables companies to first
16 focus on these operational dimensions, and thus bring competitive differentiation
17 to nearly every facet of service design other than those linked to the network
18 itself.⁴⁹

⁴⁹ This is not to say that there are not network-related differences in service design, such as the fundamental difference between a broadband and narrowband arrangement. But *among* narrowband services, there are few differences introduced at the network level – most differences between products and carriers are a function of pricing, packaging and support, not the network itself.

1 **Q. Does UNE-P promote the deployment of new technologies?**

2

3 **A.** Yes. It is clear that the strategy of “build first, learn second” is of questionable
4 economic vitality. A more practical approach is to *first* establish the customer and
5 operations-related components of local expertise – i.e., the corporate
6 infrastructure that underlies service innovation, customer acquisition and
7 achieving some measure of profitability – and *then* begin the process of facilities
8 deployment. This may be obvious, but the only viable path to competitive
9 network investment is the path that includes viable competitors. As one investor
10 recently made clear:

11

12 "There's no one coming to the rescue." Wall Street already has lost
13 an "untold amount of money" in the sector and has no inclination
14 to invest more until CLECs show the ability to generate growing
15 profits.⁵⁰
16

17 UNE-P brings immediate competitive benefit and creates a lasting foundation for
18 competitive investment. As to the immediate competitive benefit, it is useful to
19 place in context just how significant are the non-network related functions of local
20 telephony. Even BellSouth, an entirely “facilities-based” carrier, spends only 43

⁵⁰ “Wall Street Won’t Be Riding to Rescue CLECs, Analysts Say,” Telecommunications Daily, November 29, 2001, quoting Glenn Waldorf, director-U.S. equity research at UBS Warburg LLC.

1 cents of every dollar on network-related costs.⁵¹ Not only does it make sense to
2 create the non-network corporate infrastructure *first*, is also represents the *larger*
3 part of the business. Moreover, UNE-P creates a foundation of competitive
4 providers that will attract additional capital, and continue to grow and innovate to
5 differentiate themselves from BellSouth and each other.

6
7 **Q. How does UNE-P promote additional facilities investment?**

8
9 A. UNE-P provides a critical catalyst to additional network deployment in three
10 ways. First, it is important to appreciate that UNE-P is fundamentally a
11 narrowband strategy. Because UNE-P enables entrants to use BellSouth's
12 inherited narrowband network for the voice component of their service, they are
13 able to direct their investment capital to *broadband* investments that complement
14 their product-line. For instance, UNE-P can be used by an entrant to provide
15 voice service in a package with xDSL service using either its own investment, or
16 the investment of a strategic partner. In this way, the entrant can offer the
17 customer a *package* of voice and advanced data services, without having to
18 replicate the voice network.⁵²

⁵¹ Source: ARMIS 43-01. BellSouth's network related costs for Tennessee are estimated as the sum of Plant Specific Operating Expenses, Plant Non-Specific Operating Expenses, Depreciation and Amortization.

⁵² As the Authority is well aware, entrants offering "stand alone" data services – i.e., data services that were not offered as a service package with voice – have been notably unsuccessful, with the three "national entrants" (Covad, Rhythms and Northpoint) all declaring bankruptcy.

1
2 Second, once a competitive layer gets firmly established – with customers,
3 revenues and traffic – that layer will encourage the deployment of additional
4 facilities by others. By way of comparison, from 1985 to 1998, nearly half of all
5 long distance fiber route miles were installed by the “second tier” of
6 interexchange carriers – such as Qwest, Williams and IXC Communications – that
7 were predominately interested in wholesale sales.⁵³ More recently (since 1995),
8 nearly 90% of all new fiber route miles were installed by wholesale providers. A
9 similar dynamic can be expected in the local market.⁵⁴

10
11 Finally, providers that use UNE-P will begin facilities-replacement wherever
12 efficient and appropriate to the customers’ needs. Indeed, many UNE-P providers
13 are also facilities-based for other customer segments, areas or product lines.
14 There is no economic tension between UNE-P and facilities-deployment; rather,
15 each is a complementary strategy in the evolution of a competitive local market.
16

17 **Q. What is likely to occur if the Authority does not require BellSouth to offer**
18 **the components of UNE-P at cost-based rates?**

⁵³ Source: Fiber Deployment Update – End of Year 1998, Industry Analysis Division,
Common Carrier Bureau, Federal Communications Commission.

⁵⁴ Unfortunately, the reverse dynamic is also possible – if a competitive local layer fails to
emerge, equipment vendors will develop only those products that cater to the largest providers.
This process has already begun with Lucent, which has announced it will focus its sales efforts on
the “world’s 30 largest telecom service providers.” TR Daily, August 28, 2001.

1

2 A. There would be a number of competitive harms if the Authority does not
3 determine that local switching should be offered throughout Tennessee as an
4 unbundled network element. Foremost would be the collapse of mass market
5 local competition. As I indicated earlier, the Telecommunications Act of 1996
6 did more than merely *hope* that local competition would succeed – it effectively
7 *bet* the future of competition in all adjacent markets on its belief that (with access
8 to network made available to all) local competition would succeed. With an
9 ability to jointly offer competitive services (such as long distance and Internet
10 access) with its local services, BellSouth is positioned to recapture the position it
11 had prior to divestiture as a fully integrated monopoly.⁵⁵

12

13 Remonopolization is not speculation, it is extrapolation – and the resulting losses
14 in competition, efficiency and innovation are a very real threat to consumers and
15 the American economy. It is a bitter irony that the reason SBC and Verizon have
16 been able to so quickly penetrate the long distance market is that they had
17 available to them the “long distance” equivalent of UNE-P – willing wholesale
18 providers that offer end-to-end transmission and switching, and a fully automated
19 provisioning system (the “PIC change” process) that rapidly, inexpensively and

⁵⁵ For instance, SBC recently explained to Wall Street that they would not even consider a potential merger with AT&T unless AT&T’s consumer unit was “assigned no value.” (AMRO Research Notes, November 8, 2001). This candid statement is an admission by SBC that it expects to win AT&T’s customer base in-region (and would fail to defend it out-of-region).

1 reliably migrates customers. The only alternative to remonopolization is a
2 vibrantly competitive, local mass market.

3
4 **Q. Is the additional unbundling you recommend consistent with the “optional”**
5 **factors that the FCC enumerates?**

6
7 A. Yes. As discussed earlier in this testimony, in addition to the “impairment
8 analysis,” the FCC also identified a number of other factors that a State
9 Commission could consider when conducting an unbundling review under the
10 federal Act. These additional factors include whether the requested unbundling
11 promotes the rapid introduction of competition; promotes facilities-based
12 competition, investment, and innovation; promotes reduced regulation; provides
13 certainty to requesting carriers; and whether the recommended unbundling is
14 administratively practical to apply.⁵⁶ I have already testified at length concerning
15 the importance of local switching to the rapid introduction of competition, and its
16 relationship to facilities-based entry. The unbundling I recommend here is also
17 appropriate to promote reduced regulation, it would provide needed certainty, and
18 it is far more administratively practical than the existing federal approach.

19
20 **Q. Please explain how these remaining factors support the continued availability**
21 **of UNE-P.**

⁵⁶ 47 C.F.R. §51.317(b)(3).

1

2

A. First, with respect to promoting reduced regulation, the fundamental predicate to deregulation is competition. As the data clearly shows, competition in the Tennessee local market is critically dependent upon access to local switching (and the UNE-P that it makes possible). Eliminate the competition created through UNE-P and the need to regulate BellSouth increases commensurately.

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Second, one of the reasons that this testimony has been filed is to eliminate the uncertainty that surrounds UNE availability at the federal level. As I indicated earlier, local competition is fundamentally a local matter, and the industry needs the type of leadership and commitment to competition that this Authority has shown in the past.

Finally, the “administrative practicality” of the unbundling approach recommended here is far simpler to implement than the current federal approach.

Under the approach that I recommend, analog loops would be available in combination with unbundled switching throughout the State. There is no administrative issue with respect to this recommendation. The sole limitation on local switching I recommend is that a high-speed digital loop could not be ordered

**Direct Testimony of Joseph Gillan
On Behalf of the Tennessee UNE-P Coalition
Docket No. _____**

1 demonstrates that UNE-P is necessary to local competition. The Authority should
2 exercise its clear authority (under both State and federal law) to make sure that
3 UNE-P continues to be available and is appropriately priced. The testimony
4 above provides the economic support for such a decision, while the decisions of
5 individual Tennessee consumers and businesses provide the most compelling
6 validation possible – they have shown where their interests lie by the choices they
7 have made.

8
9 **Q. Does this conclude your direct testimony?**

10
11 **A. Yes.**